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The association between life course socioeconomic position and life satisfaction in different welfare states: European comparative study of individuals in early old age

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Abstract

Background: whether socioeconomic position over the life course influences the wellbeing of older people similarly in different societies is not known.
Objective: to investigate the magnitude of socioeconomic inequalities in life satisfaction among individuals in early old age and the influence of the welfare state regime on the associations.
Design: comparative study using data from Wave 2 and SHARELIFE, the retrospective Wave of the Survey of Health, Ageing, and Retirement in Europe (SHARE), collected during 2006–07 and 2008–09, respectively.
Setting: thirteen European countries representing four welfare regimes (Southern, Scandinavian, Post-communist and Bismarckian).
Subjects: a total of 17,697 individuals aged 50–75 years.

Methods: slope indices of inequality (SIIs) were calculated for the association between life course socioeconomic position (measured by the number of books in childhood, education level and current wealth) and life satisfaction. Single level linear regression models stratified by welfare regime and multilevel regression models, containing interaction terms between socioeconomic position and welfare regime type, were calculated.
Results: socioeconomic inequalities in life satisfaction were present in all welfare regimes**.** Educational inequalities in life satisfaction were narrowest in Scandinavian and Bismarckian regimes among both genders. Post-communist and Southern countries experienced both lower life satisfaction and larger socioeconomic inequalities in life satisfaction, using most measures of socioeconomic position. Current wealth was associated with large inequalities in life satisfaction across all regimes.
Conclusions: Scandinavian and Bismarckian countries exhibited narrower socioeconomic inequalities in life satisfaction. This suggests that more generous welfare states help to produce a more equitable distribution of wellbeing among older people.

Keywords: *socioeconomic factors, welfare, ageing, satisfaction, quality of life, older people*

Introduction

Improving mental wellbeing throughout the life course is recognised as an important component of healthy ageing [1]. Healthy ageing is influenced by an individual's socioeconomic position throughout the life course [2, 3], but also by societal level factors such as the welfare state [4, 5]. Early old age, containing both the retired and those in the final stages of working life, is increasingly acknowledged as an important stage of the life course, as the labour force across Europe is becoming older [1]. Measuring wellbeing and its determinants among this population is therefore considered a high policy priority.

The welfare state is thought to be a major determinant of the patterning of inequalities in health and wellbeing [4], as it may modify the effect of socioeconomic position on these outcomes. It is unlikely that any single aspect of the welfare state is responsible for wellbeing, but rather its influence is likely to arise as a result of a combination of policies. Five welfare regimes have been characterised within Europe. These are based on the differing contributions of the family, market, and state to the welfare of individuals within a country [6]. Southern countries (including Spain and Greece) typically have fragmented income maintenance schemes and exhibit high dependency on the family and voluntary sector [7, 8]. Scandinavian countries are characterised by a more interventionist state that seeks to promote social equality via principles of redistribution, universalism, a commitment to full employment and income-protection [6, 9]. Germany and France exemplify Bismarckian regimes. Benefits are usually earnings-related and administered by the employer, a supportive role for the family is encouraged, and social divisions are maintained [6]. Post-communist countries (including Poland and the Czech Republic) are characterised by their transition from communism to market economies and have social security systems which provide limited coverage [10]. The UK and Ireland are considered to be part of a 'Liberal' regime type, characterised by market dominance and modest state benefits, which are often means-tested [11].

Our study aims to first examine the magnitude of socioeconomic inequalities in life satisfaction among Europeans in early old age, using measures of socioeconomic position from across the life course. Second, we investigate the influence of the type of welfare regime on socioeconomic inequalities in life satisfaction.

Methods

Data source

Data were taken from Wave 2 (release 2.5.0) and SHARELIFE (release 1.0.0), the retrospective Wave of the Survey of Health, Ageing and Retirement in Europe (SHARE) collected during 2006–07 and 2008–09, respectively. SHARE is a longitudinal panel survey, which collected representative data from individuals aged 50 and over in 13 European countries. Further information about SHARE is found elsewhere [12, 13]. The population studied included individuals in early old age (50–75 years) participating in Wave 2 and SHARELIFE, who were born in their current country of residence ($n = 18{,}324$).

Outcome variable

During Wave 2 participants were asked: 'On a scale from 0 to 10 where 0 means completely dissatisfied and 10 means completely satisfied, how satisfied are you with your life?' Life satisfaction is a valid measure of wellbeing, which contains substantial information about how individuals evaluate their lives [14]. Life satisfaction was treated as a continuous variable to ease the interpretation and comparison of results [15, 16].

Exposure variables

Childhood socioeconomic position was captured by the number of books in the household when the participant was aged 10 years, collected via retrospective recall. Education level was recorded using the International Standard Classification of Education (ISCED-97) [17]. Current household wealth (equivalised) was derived from a series of questions relating to financial and real assets, as well as liabilities [18]. Countries were grouped into four welfare regimes: Southern (Greece, Italy and Spain), Scandinavian (Denmark and Sweden), Post-communist (Czech Republic and Poland)

and Bismarckian (Austria, Belgium, France, Germany, the Netherlands and Switzerland).

Statistical analyses

To quantify socioeconomic inequalities in life satisfaction, slope indices of inequality (SIIs) were calculated [19]. Each measure of socioeconomic position was ranked from the least advantaged to the most advantaged (with the mid-point of their range in the cumulative distribution used for each category) [20]. These were standardised to produce a rank, where the theoretically most advantaged had a value of 1 and least advantaged a value of 0. The SII was calculated by running linear regression models using the socioeconomic rank to predict the outcome measure. It can be understood as the difference in mean life satisfaction between the hypothetically least and most socioeconomically advantaged. Since socioeconomic distributions varied by country, gender and cohort (pre-1946 and post-1945) separate ranks were calculated for each of these groups. Relative indices of inequality by gender and welfare regime were also calculated by dividing the SII by the mean life satisfaction.

Single level linear regression models stratified by welfare regime and containing country fixed effects were run to calculate the SIIs. Multilevel (random-intercept) regression models were also calculated to test the statistical interaction between the welfare regime type and socioeconomic position. All analyses were stratified by gender and adjusted for age group in 5-year bands. Further methodological details available in the Supplementary data available in *Age and Ageing* online, Appendix S1.

Results

The highest level of life satisfaction was found in Scandinavian countries and the lowest in Post-communist countries (Table 1). Full-descriptive statistics are found in Supplementary data available in *Age and Ageing* online, Appendix S2. Table 1 displays the SIIs for each measure of socioeconomic position stratified by welfare regime (results from the multilevel models are found in Supplementary data available in *Age and Ageing* online, Appendix S3). Narrower socioeconomic inequalities in life satisfaction were found in Scandinavia, when examining the effect of the number of books in childhood. For men in Scandinavia, the SII was 0.08 (95% CI: −0.18 to 0.35) and for women 0.13 (95% CI: −0.11 to 0.37). Differences in life satisfaction between welfare regimes were most apparent at the least advantaged end of the socioeconomic ranking and narrowed as the rank increased (Supplementary data available in *Age and Ageing* online, Appendix S4). SIIs were larger in each of the other regimes among both genders, largest for men in the Post-communist regime and for women in the Southern regime.

Narrowest educational inequalities in life satisfaction were found among men and women in Scandinavia (Figure 1A and B). The SII for men in Scandinavia was 0.37 (95% CI: 0.09 to 0.65) and for women 0.13 (95% CI: −0.13 to 0.38). Among both genders, the Bismarckian regime also exhibited relatively narrow inequalities in life satisfaction. Largest education SIIs were found in the Post-communist regime for both men (SII = 1.11, 95% CI: 0.70 to 1.52) and women (SII = 1.39, 95% CI: 1.00 to 1.77).

Wealth inequalities in life satisfaction were smallest in Scandinavia for both genders (Figure 1C and D). However, the SIIs for wealth were mostly larger across all regimes compared with the other measures. In Scandinavia, the SII for men was 0.73 (95% CI: 0.48 to 0.99) and for women 0.67 (95% CI: 0.44 to 0.91). These were not much larger in the Bismarckian regime and were largest in the Post-communist regime. Scandinavian countries also exhibited the narrowest relative inequalities in life satisfaction (Supplementary data available in *Age and Ageing* online, Appendix S5). For most measures of socioeconomic position, the Bismarckian

Table 1. Mean life satisfaction and slope indices of inequality by welfare regime and gender for each measure of socioeconomic position

	Southern		Scandinavian		Post-communist		Bismarckian	
Men	Mean	SD	Mean	SD	Mean	SD	Mean	SD
	7.56	1.56	8.44	1.34	6.94	1.98	7.76	1.55
	SII	95% CI	SII	95% CI	SII	95% CI	SII	95% CI
Number of books in childhood	0.49	(0.23, 0.76)	0.08	(−0.18, 0.35)	0.92	(0.52, 1.32)	0.49	(0.31, 0.66)
Education level	0.74	(0.47, 1.01)	0.37	(0.09, 0.65)	1.11	(0.70, 1.52)	0.54	(0.36, 0.72)
Current wealth	1.08	(0.86, 1.29)	0.73	(0.48, 0.99)	1.19	(0.83, 1.55)	0.75	(0.58, 0.91)
N	2,326		1,272		1,226		3,220	
Women								
	7.18	1.77	8.46	1.34	6.52	2.10	7.62	1.70
	SII	95% CI	SII	95% CI	SII	95% CI	SII	95% CI
Number of books in childhood	1.10	(0.83, 1.36)	0.13	(−0.11, 0.37)	0.96	(0.60, 1.33)	0.53	(0.35, 0.70)
Education level	1.22	(0.93, 1.51)	0.13	(−0.13, 0.38)	1.39	(1.00, 1.77)	0.42	(0.23, 0.60)
Current wealth	1.09	(0.87, 1.31)	0.67	(0.44, 0.91)	1.47	(1.14, 1.80)	1.00	(0.83, 1.16)
N	2,743		1,429		1,613		3,868	

CI, confidence interval; *N*, number of individuals; SD, standard deviation; SII, slope index of inequality.

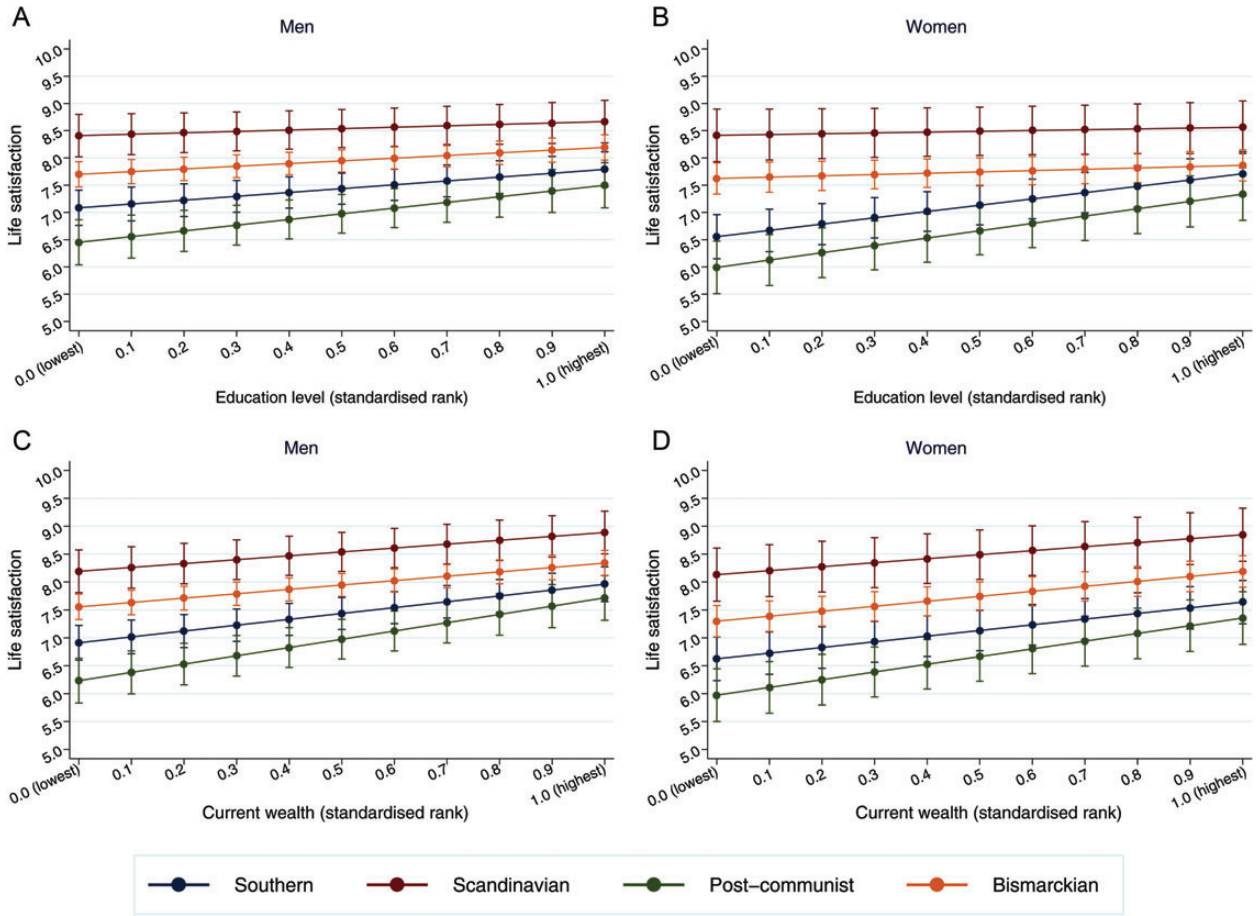

Figure 1. Age-adjusted predicted mean life satisfaction (with 95% confidence intervals) by education level and current wealth for men (n = 8,044) and women (n = 9,653) in different welfare regimes.

regime also displayed narrower relative inequalities compared with Southern and Post-communist countries.

Discussion

Socioeconomic inequalities in life satisfaction among Europeans in early old age were present in all welfare regimes. The Scandinavian welfare regime exhibited the narrowest inequalities in life satisfaction, using all three measures of socioeconomic position from across the life course. Post-communist countries generally exhibited the largest socioeconomic inequalities in life satisfaction. Inequalities in life satisfaction were largest using current wealth in most regimes, but inequalities by education level were large, particularly among women in the Post-communist and Southern regimes. Highest levels of life satisfaction were also found in the Scandinavian regime and the lowest in the Post-communist regime.

This study has a number of strengths, including the utilisation of high quality and comparable survey data. Potential limitations include the risk of attrition and survival bias. However, the expected direction of bias is likely to underestimate the magnitude of inequalities [21–23]. Few studies have investigated the influence of the welfare regime on socioeconomic inequalities in wellbeing among older populations, with most studies using negative measures of health. Socioeconomic inequalities in poor self-rated health were found to be narrower in Nordic countries [24, 25], but others have had contradictory results [26, 27].

Our results have important implications for future research and policy, especially given the recent welfare policy changes across Europe [28]. As life satisfaction captures one aspect of wellbeing, further research using different indicators is needed to check the consistency of findings. The differing magnitude of inequalities by measure of socioeconomic position highlights the importance of using multiple measures when quantifying inequalities in health, especially among older populations. We recommend future research examines the impact of changes to welfare policy to try and unpack which policies may foster a more equitable distribution of wellbeing. Our findings suggest that mechanisms to buffer the effect of socioeconomic disadvantage in early old age specifically, perhaps through more redistributive fiscal policy and universal pensions, may help to reduce socioeconomic inequalities in life satisfaction for this age group.

Key points

- Wellbeing is an important component of healthy ageing and is influenced by socioeconomic position across the life course.
- Socioeconomic inequalities in life satisfaction were most apparent in Post-communist and Southern countries.
- Scandinavian and Bismarckian regimes exhibited narrowest absolute and relative inequalities in life satisfaction.
- Welfare policy that buffers the effect of low socioeconomic position may help reduce socioeconomic inequalities in wellbeing.

Conflicts of interest

None declared.

Ethical approval

This study is an analysis of previously collected data and therefore ethical approval was not required for this study. Ethical approval for the survey was obtained by the SHARE team, see http://share-dev.mpisoc.mpg.de/ for details.

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Supplementary data

Supplementary data mentioned in the text is available to subscribers in *Age and Ageing* online.

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Undergraduate teaching in geriatric medicine: mapping the British Geriatrics Society undergraduate curriculum to *Tomorrow's Doctors 2009*

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Abstract

Introduction: in 2008, the British Geriatrics Society (BGS) developed the Recommended Undergraduate Curriculum in Geriatric Medicine. This was subsequently mapped to the second edition of *Tomorrows' Doctors* (TD2, 2003). Following the publication of the third edition of *Tomorrow's Doctors* in 2009 (TD3), the mapping exercise was repeated to verify the extent to which the updated General Medical Council recommendations supported teaching in ageing and geriatric medicine.
Method: we analysed TD3 and identified 48 aspects of its general guidance that were relevant to the teaching of medicine for older people. We then mapped these to the 2009 BGS curriculum.